

Headquarters, R&D,  
Manufacturing,  
Domestic and  
International sales

Obelux Oy  
Kutomotie 6B  
FI-00380 Helsinki  
Finland

Tel +358 9 6871 6800  
Fax +358 9 621 5518  
E-mail info@obelux.com  
www.obelux.com



# CR9

LIGHT SOURCE FOR FORENSIC CRIME SCENE INVESTIGATION



# CR9

LIGHT SOURCE FOR FORENSIC CRIME SCENE INVESTIGATION

LATEST LED TECHNOLOGY

BATTERY AND AC OPERATED

MULTICOLOUR

SMOOTH AND UNIFORM LIGHT OUTPUT

EXCELLENT SURFACE ILLUMINATION

**CONTENT**

INTRODUCTION	2
LAMP TYPES	3...6
<b>CR9-UWV-A1</b> <i>UV/WHITE/VIOLET</i>	3
<b>CR9-BCG-A1</b> <i>ROYAL BLUE/CYAN/GREEN</i>	4
<b>CR9-W-A1</b> <i>WHITE</i>	5
<b>CR9-B-A2</b> <i>ROYAL BLUE</i>	6
AC ADAPTER	7
FILTER GOGGLES AND FILTER SHEETS	8
CAMERA FILTER SYSTEM	9
ORDERING	30

**STANDARD KIT 1. KIT-UWV-A1 INCLUDES**

ITEM	CODE	DESCRIPTION
Crime Light CR9 LED Lamp	<b>CR9-UWV-A1</b>	UV/WHITE/VIOLET
AC Adapter 230 V	<b>AC-DC70-A1</b>	70 W 12 DC
Car Adapter	<b>AD-CAR-A1</b>	Cable length 1.5 m
Carrying Case	<b>CC-1U-A1</b>	IP 67
Yellow goggles	<b>FGY-33-5032</b>	Goggle protection bag also suitable for lens cleaning
Clear goggles	<b>FGC-33-10</b>	Ideal for lamp cleaning
Obelux Lens Cloth		

ORDER CODE: **KIT-UWV-A1**

**STANDARD KIT 2. KIT-BCG-A1 INCLUDES**

ITEM	CODE	DESCRIPTION
Crime Light CR9 LED Lamp	<b>CR9-BCG-A1</b>	ROYAL BLUE/CYAN/GREEN
AC Adapter 230 V	<b>AC-DC70-A1</b>	70 W 12 DC
Car Adapter	<b>AD-CAR-A1</b>	Cable length 1.5 m
Carrying Case	<b>CC-1U-A1</b>	IP 67
Orange goggles	<b>FGO-33-60</b>	Goggle protection bag also suitable for lens cleaning
Yellow goggles	<b>FGY-33-5032</b>	
Clear goggles	<b>FGC-33-10</b>	Ideal for lamp cleaning
Obelux Lens Cloth		

ORDER CODE: **KIT-BCG-A1**

**ORDER CODES**

ITEM	ORDER CODE	DESCRIPTION
Light unit 3-colour	<b>CR9-UWV-A1</b>	UV/WHITE/VIOLET
Light unit 3-colour	<b>CR9-BCG-A1</b>	ROYAL BLUE/CYAN/GREEN
Light unit white oval	<b>CR9-W-A1</b>	WHITE Oval lens
Light unit white spot	<b>CR9-W-A2</b>	WHITE Spot lens
Light unit royal blue spot	<b>CR9-B-A2</b>	ROYAL BLUE Spot lens
Camera filter sheet yellow	<b>FSY-P4-5032</b>	
Camera filter sheet orange	<b>FSO-P4-60</b>	
Camera filter sheet red	<b>FSR-P4-90</b>	
Camera filter adaptor ring	<b>AR-P4-XX</b>	Various sizes (page 10.)
Camera filter holder	<b>FH-P4-01</b>	
Car DC adapter	<b>AD-CAR-A1</b>	Cable length 1.5 m
AC Adapter	<b>AC-DC70-A1</b>	AC Adapter and standard cord
Spare battery	<b>LPB-07V4-39</b>	Lithium polymer 39 Wh
Clear goggles	<b>FGC-33-10</b>	Goggle protection bag also suitable for lens cleaning
Yellow goggles	<b>FGY-33-5032</b>	
Orange goggles	<b>FGO-33-60</b>	
Red goggles	<b>FGR-33-90</b>	
Carrying case for 1-light unit	<b>CC-1U-A1</b>	PELI case 1450, IP 67
Carrying case for 2-light unit	<b>CC-2U-A1</b>	PELI case 1550, IP 67



FEEL FREE TO ASK LIGHT UNITS WITH CUSTOM COLOURS

**AVAILABLE LED COLOURS**

COLOUR	WAVELENGTHS
<b>Uv</b>	365 / 385 nm
<b>Violet</b>	405 / 410 / 415 / 438 nm
<b>Royal Blue</b>	450 nm
<b>Blue</b>	470 nm
<b>Cyan</b>	500 nm
<b>Green</b>	530 nm
<b>Yellow (amber)</b>	590 nm
<b>Red orange</b>	615 nm
<b>Red</b>	630 nm
<b>White</b>	2700 / 3500 / 5500 K
<b>Infrared</b>	850 / 940 nm

**LENS**

All colours also available with  $\pm 3^\circ$   $\pm 6^\circ$   $\pm 25^\circ$  and Oval  $\pm 6^\circ \times \pm 22,5^\circ$  lens.

Maximum four different colours for one light unit.

## CAMERA FILTER SYSTEM

### FILTER SYSTEM

Consists of 3 main components:

1. Adaptor Ring
2. Filter Holder
3. One or more filters



Screw the adaptor ring onto your lens.  
**ADAPTOR RING ORDER CODE: AR-P4-XX**, where XX is camera outer lens diameter.



Slide the filter-holder on the adaptor ring until it snaps in place.  
 The filter-holder is now solidly attached to the lens, yet it can rotate both left and right.  
**FILTER-HOLDER ORDER CODE: FH-P4-01**



Slide the filter sheet into central filter-holder slot.  
**FILTER SHEET ORDER CODES:**  
**YELLOW: FSY-P4-5032 / ORANGE: FSO-P4-60 / RED: FSR-P4-90**

### FILTER SYSTEM RINGS

CAMERA OUTER LENS DIAMETER (mm)	ADAPTOR RING ORDER CODE
48 Ø	P4-48
49 Ø	P4-49
52 Ø	P4-52
55 Ø	P4-55
58 Ø	P4-58
62 Ø	P4-62
67 Ø	P4-67
72 Ø	P4-72
77 Ø	P4-77
82 Ø	P4-82



# CR9

## LIGHT FOR FORENSIC CRIME SCENE INVESTIGATION

Finally available multicolour light source, in which each section colour intensity is the most extensive and plane, compared to other light sources on the market. Wide light opening guarantees smooth luminance distribution without hotspots. Product is slim and functional considering all its many features. The adjustable handle with tripod socket helps controlling the light beam, for example in footprint examination.

### KEY FEATURES

- Adjustable built-in intensity control
- Stabilised light output
- Shock and vibration resistant
- Very low power consumption
- Range of long life LED light sources
- Range of wavelengths including UV and white
- Spot and oval light beam, without hotspots
- Rechargeable batteries
- Battery discharge protection
- Over temperature protection
- Tripod socket 1/4"-20 UNC in handle
- Splash waterproof (IP 54)
- Portable crime scene kits

### TECHNICAL SPECIFICATIONS

<b>Weight</b>	With battery 1.9 kg	
<b>Light unit size</b>	Length 220 mm	Width 88 mm
	Height 50 mm	
<b>Battery</b>	Lithium polymer (39 Wh) Mains charger and car charger adapter supplied as standard	
<b>Typical continuous operation time</b>	100 % light output	120 min
	70 % light output	200 min
	35 % light output	400 min
<b>Operating temperature range</b>	-30°C...+50°C	
<b>Housing</b>	Black anodised marine grade aluminium body and end parts. AISI 316 acid proof steel screws.	

The photos below illustrate a test using Obelux Crime Light CR9.



Photo 1: Footprint. The oval lens gives the maximum horizontal luminous efficiency.



Photo 2: Bloodstained fingerprint. Crime Light CR9, 417 nm, f22, time 4 s.



Photo 3: Bloodstained fingerprint. No light.



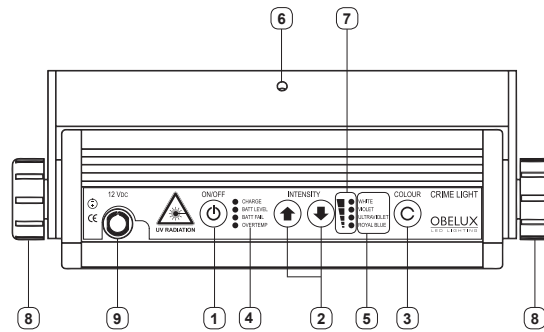
Photo 4: Bloodstained fingerprint. Obelux CR9, 417 nm, f22, time 15 s.

## 3-COLOUR

### LIGHT UNIT TYPE CR9-UWV-A1

Light colour	UV	White	Violet
<b>Beam</b>	Spot	Oval	Spot
<b>Beam width</b>	12° (±6°)	12° x 45°	12° (±6°)
<b>Wavelength</b>	385 ± 5 nm	5500 ± 500 K	417 ± 5 nm
<b>Spectra half width</b>	10 nm	220 nm	15 nm
<b>Light output</b>	1600 mW	3000 lm	1600 mW
<b>Operating time 100 % light output with batteries</b>			
	120 min	60 min	120 min
<b>Operating time 85 % light output with batteries (dimming 1-step)</b>			
	160 min	120 min	160 min

ORDER CODE: **CR9-UWV-A1** OVAL LENS FOR WHITE LEDS  
 ORDER CODE: **CR9-UWV-A2** SPOT LENS FOR WHITE LEDS



- 1 ON /OFF
- 2 INTENSITY CONTROL -8 step
- 3 COLOUR SELECTOR
- 4 STATUS LIGHTS
- 5 COLOUR INDICATOR
- 6 TRIPOD SOCKET
- 7 MULTIMODE INDICATOR -Battery level -Intensity level -Temperature
- 8 HANDLE POSITIONING KNOB
- 9 DC CONNECTOR 12 VDC

The photos below illustrate a test using Obelux Crime Light CR9.



CR9-UWV-A1 Lens oval 12° x 45°, colour white. (Distance from wall 1 m.)



CR9-UWV-A2 Lens spot 12°, colour white. (Distance from wall 1 m.)



CR9-UWV-A1 Lens spot 12°, UV 395 nm. (Distance from wall 1 m.)



CR9-UWV-A1 Lens spot 12°, Violet 417 nm. (Distance from wall 1 m.)

### FILTER GOGGLES

ORDER CODE	UV	Violet	Royal Blue	Cyan	Green	Red
Clear <b>FGC-33-10</b>						
Yellow <b>FGY-33-5032</b>	•	•				
Orange <b>FGO-33-60</b>	•	•	•	•		
Red <b>FGR-33-90</b>					•	•

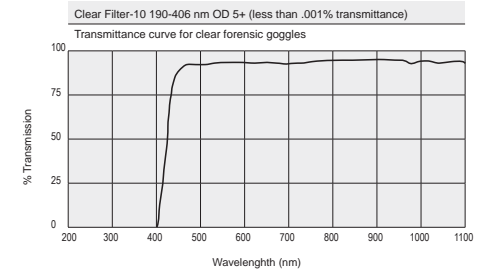
Available for both coherent and non-coherent UV, Blue, Green, Yellow and Red light sources.  
 Universal fit for those with and without Rx glasses.

### KEY FEATURES

- Each pair of filter goggles and camera sheets has same transmittance curve
- Redesigned for better temple and cheek coverage
- Reinforced material for higher damage thresholds
- Universal fit for those with and without Rx glasses

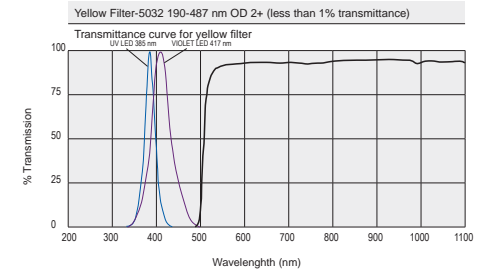
#### Clear filter goggles

ORDER CODE: **FGC-33-10**



#### Yellow filter goggles

ORDER CODE: **FGY-33-5032**



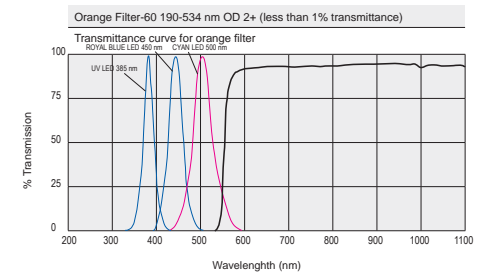
#### Yellow filter sheet

ORDER CODE: **FSY-P4-5032**



#### Orange filter goggles

ORDER CODE: **FGO-33-60**



#### Orange filter sheet

ORDER CODE: **FSO-P4-60**



FILTER GOGGLES Available also style 700.



AC ADAPTER

AC ADAPTER AC-DC70-A1

Voltage	90...264 Vac
Frequency	50...60 Hz
Inrush Current	60 A max. @240 Vac
Conducted EMI	CISPR/FCC Class B
Isolation	Input to output = 4242 VDC
Leakage Current	3.5 mA max.
Holdup Time	8 ms typ. @115 Vac
Short Circuit Protection	Continuous
Over Voltage Protection	Yes
Operating Temperature	0...40°C
Storage Temperature	-20...+85°C
Dimensions	132 x 58 x 30.5 mm
Weight	345 g
AC inlet	IEC 320/ C14
DC cable length	Extra long 3 m

ORDER CODE: AC-DC70-A1

- The universal AC Adapter for simultaneous battery charging and operation of the light unit
- Typical charging time 2.5 h.



AC-DC70-A1 AC Adapter and standard cord

AC plug available also with other country standards

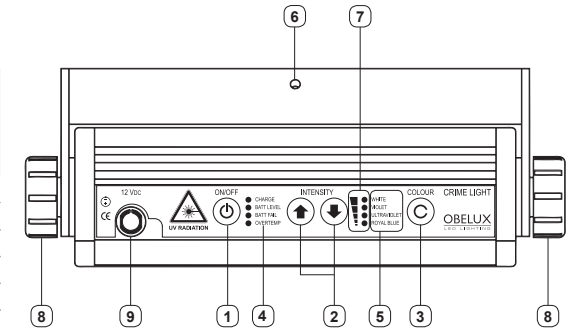
CR9-BCG-A1 ROYAL BLUE/CYAN/GREEN

## 3-COLOUR

LIGHT UNIT TYPE CR9-BCG-A1

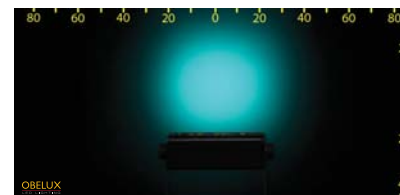
Light colour	Royal Blue	Cyan	Green
Beam	Spot	Spot	Spot
Beam width	12° (±6°)	12° (±6°)	12° (±6°)
Wavelength	450 ± 10 nm	500 ± 10 nm	530 ± 10 nm
Spectra half width	24 nm	30 nm	30 nm
Light output	6800 mW	640 lm	800 lm
Operating time 100% light output with batteries			
	120 min	120 min	120 min
Operating time 85% light output with batteries (dimming 1-step)			
	160 min	160 min	160 min

ORDER CODE: CR9-BCG-A1

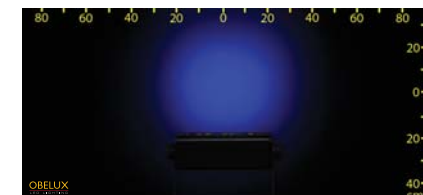


- ① ON /OFF
- ② INTENSITY CONTROL -8 step
- ③ COLOUR SELECTOR
- ④ STATUS LIGHTS
- ⑤ COLOUR INDICATOR
- ⑥ TRIPOD SOCKET
- ⑦ MULTIMODE INDICATOR -Battery level -Intensity level -Temperature
- ⑧ HANDLE POSITIONING KNOB
- ⑨ DC CONNECTOR 12 VDC

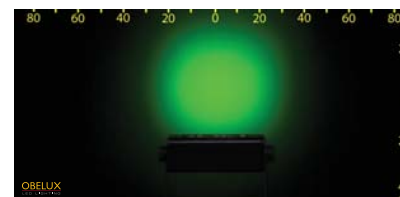
The photos below illustrate a test using Obelux Crime Light CR9.



CR9-BCG-A1 Lens spot 12°, Cyan 500 nm. (Distance from wall 1 m.)



CR9-BCG-A1 Lens spot 12°, Blue 450 nm. (Distance from wall 1 m.)



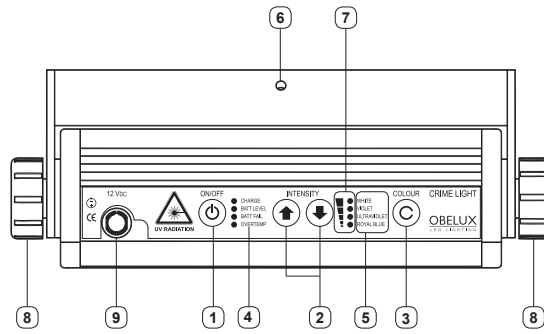
CR9-BCG-A1 Lens spot 12°, Green 530 nm. (Distance from wall 1 m.)

## WHITE

### LIGHT UNIT TYPE CR9-W-A1

Light colour	White
Beam	Oval
Beam width	12° x 45°
Wavelength	6000 ± 500 K
Spectra half width	220 nm
Light output	5000 lm
Operating time 100% light output with batteries	45 min
Operating time 85% light output with batteries (dimming 1-step)	90 min

ORDER CODE: **CR9-W-A1**, OVAL LENSES  
ORDER CODE: **CR9-W-A2**, SPOT LENSES



- ① ON /OFF
- ② INTENSITY CONTROL  
-8 step
- ③ COLOUR SELECTOR
- ④ STATUS LIGHTS
- ⑤ COLOUR INDICATOR
- ⑥ TRIPOD SOCKET
- ⑦ MULTIMODE INDICATOR  
-Battery level  
-Intensity level  
-Temperature
- ⑧ HANDLE POSITIONING KNOB
- ⑨ DC CONNECTOR 12 VDC

The photos below illustrate a test using Obelux Crime Light CR9.



CR9-W-A1 Lens oval 12° x 45°, colour white. (Distance from wall 1 m.)



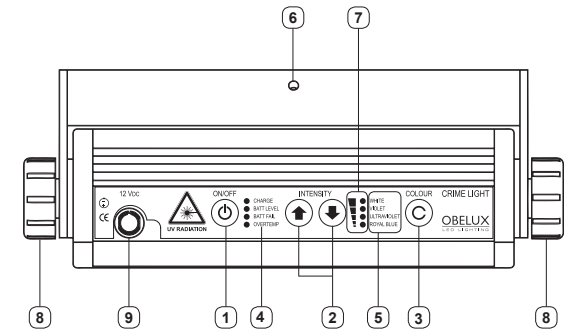
CR9-W-A2 Lens spot 12°, colour white. (Distance from wall 1 m.)

## BLUE

### LIGHT UNIT TYPE CR9-B-A2

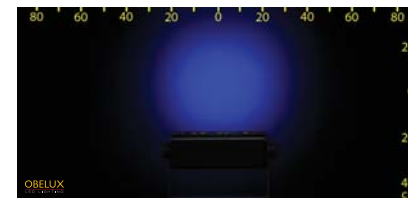
Light colour	Royal Blue
Beam	Spot
Beam width	12° (±6°)
Wavelength	455 ± 10 nm
Spectra half width	24 nm
Light output	15000 mW
Operating time 100% light output with batteries	45 min
Operating time 85% light output with batteries (dimming 1-step)	90 min

ORDER CODE: **CR9-B-A2**



- ① ON /OFF
- ② INTENSITY CONTROL  
-8 step
- ③ COLOUR SELECTOR
- ④ STATUS LIGHTS
- ⑤ COLOUR INDICATOR
- ⑥ TRIPOD SOCKET
- ⑦ MULTIMODE INDICATOR  
-Battery level  
-Intensity level  
-Temperature
- ⑧ HANDLE POSITIONING KNOB
- ⑨ DC CONNECTOR 12 VDC

The photo below illustrate a test using Obelux Crime Light CR9.



CR9-B-A2 Lens spot 12°, Blue 450 nm. (Distance from wall 1 m.)